

# MANAGEMENT REPORTS

# CIS Re-Engineering Model and Approach

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***DRAFT***

# CIS Re-Engineering Model and Approach

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# CIS Re-Engineering Model and Approach

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## Executive Summary:

The CIS Re-Engineering Model and Approach document details the **recommended** approach to implement the CorDaptix CIS application suite. The model and approach document will initially be utilized to develop the project cost model and business case. Once the **project** is approved, it will be the initial input for the in-depth analysis for the next stage following the successful implementation of Credit.

## History

Since 1968 Nicor Gas has utilized a legacy billing system referred to as the Revenue Accounting System. For over six (6) years several committees and outside consultants have studied the viability of these systems and several options have been explored to replace it. Substantial time and effort were expended evaluating and beginning to pursue a full CIS Implementation (big bang), but the scope and cost grew to unacceptable **levels** and the **project** was abandoned. Following that decision, a committee consisting of several key Nicor Gas personnel evaluated three options for replacing the systems. The options were:

- Functional migration to a packaged solution
- Outsource to a service bureau
- Stabilize and re-engineer key components to make it through the next five years while unbundling unfolded

in November of 1999 it was determined by the Senior Sponsorship Team to pursue the third option, Stabilization & Re-Engineering. It was determined that this alternative would position Nicor Gas to meet unbundling requirements on the upcoming horizon, while improving the IT infrastructure and capabilities. This **project** was approved in 1999 and came to be known as the Customer Care Information Systems Project (CCISP). *It was also understood at this time that the decision to replace the current CIS **systems** was only delayed and not eliminated.*

A group of the tasks within the scope of **CCISP** were written to address insufficiencies with the legacy Credit applications. The functionality of the current system can be described as one-size fits all and it has been unable to keep up with the changing and growing business unit requirements. Several options were explored before making the decision to evaluate package solutions in July of 2000. Based on the final vendor criteria evaluations, **SPL WorldGroup's** product known as CorDaptix was selected as the best option for Nicor based on the following key reasons:

- Meets all core business requirements
- Aligns with technology industry standards, provides more mature product and associated support tools
- Contains full suite of product offerings that Nicor can leverage for future stages

After the selection was finalized a fit assessment was completed in August of 2001 and the development **effort** was initiated in November of 2001. The Credit project is scheduled to be implemented in September of 2002.

Based on the results of the Credit and Collections Fit Assessment and an overall analysis of the future direction of CCISP, the **CCISP** project mission was changed to reflect the following:

- Enabling the necessary functionality for full unbundling
- Positioning **Nicor** Gas to aggressively replace **RA** components
- **Providing** an anchor for a **Customer** Centric database and infrastructure

Though many of the components of the original mission stayed intact (*i.e.* prepare for unbundling) much of the re-engineering tasks were canceled or substantially **modified** under the premise that Nicor would continue to implement CorDaptix, replacing the billing **systems** and related CIS **components** within a 3-4 year window.

## CIS Re-Engineering Model and Approach

### Migration Approaches

The following chart represents the four **different** migration approaches **Nicor** could take to implement the remaining Components of **CorDaptix**. After evaluating the Pros and Cons of each alternative, the Functional Migration approach was determined to be the most feasible for **Nicor**. It supports the **course** **Nicor** has taken in implementing **large** initiatives, and is in line with the **current modularization** efforts the CIS software companies are taking with their application suites.

| Implementation Type  | Pros   | Cons  |
|----------------------|--|---|
| Big Bang             | <ul style="list-style-type: none"> <li>• Least <b>costly</b> overall <b>solution</b></li> <li>• Minimizes data synchronization issues</li> <li>• Benefits are realized sooner</li> </ul>   | <ul style="list-style-type: none"> <li>• <b>High</b> one time investment</li> <li>• Extreme <b>change</b> impact to organization</li> <li>• High business risk</li> </ul>   |
| Geographical         | <ul style="list-style-type: none"> <li>• Change impact to the organization can be managed</li> <li>• Manageable business risk</li> </ul>   | <ul style="list-style-type: none"> <li>• <b>All</b> functionality must be implemented in the first stage</li> <li>• <b>High</b> one time investment</li> <li>• High Change impact to the organization <b>can</b> be managed</li> <li>• Multiple <b>processes/reporting</b> structures for same customer <b>types</b></li> </ul>               |
| Customer Type        | <ul style="list-style-type: none"> <li>• Manageable business risk</li> <li>• Change impact to the <b>organization can</b> be managed</li> </ul>  | <ul style="list-style-type: none"> <li>• <b>Most</b> functionality must be implemented in the first stage</li> <li>• High one time investment</li> <li>• Medium to <b>high</b> change impact to the organization</li> </ul>   |
| Functional Migration | <ul style="list-style-type: none"> <li>• <b>Allows</b> for checkpoints to stop and evaluate moving <b>forward</b></li> <li>• Change impact to the organization can be managed</li> <li>• Investment <b>can</b> be spread over 3-4 year period of time</li> <li>• <b>Allows</b> for orderly <b>modifications/replacement</b> of ancillary systems.</li> </ul> | <ul style="list-style-type: none"> <li>• <b>Highest</b> cost solution</li> <li>• Development of "temporary interfaces"</li> <li>• Multiple data conversions</li> <li>• Data synchronization issues</li> <li>• Heavy reliance on new interfaces between two or more <b>systems</b></li> <li>• Users <b>will</b> work on two systems</li> </ul> |

An important issue that needs to be stated is that **we will** not move all of the Unisys applications to the new platform within the scope of this project. We will still have to rely, although to a much lesser degree, on our current mainframe for applications that are not **covered** by the **CorDaptix** functionality. The major Customer Information Systems (CIS) related that would remain on the mainframe are **noted** in this approach document.

## CIS Re-Engineering Model and Approach

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### Recommended Migration Stages

Following are the recommended migration stages that are **outlined** in this document:

#### Stage 1 – Credit and Collections

This stage, which is currently being implemented, enables the credit and collection functionality of CorDaptix and captures basic customer **information** for view only access.

#### Stage 2 – Customer Information, Bill Ready Billing, Direct Access, and **Accounts** Receivable

In this stage, ownership of customer information is transferred to **CorDaptix**. All billing and **account** receivable financial transactions are passed and stored in **CorDaptix** (Bill Ready), and CorDaptix will handle all non-utility billing. In **addition**, credit functionality not included in the scope of Stage 1 will be implemented in this phase.

#### Stage 3 – Rates and Meter Read

In this stage the meter reading components will be transitioned and ownership of bill calculation will be transferred to CorDaptix. All CIS and A/R functionality has been moved to CorDaptix at the completion of this stage.

#### Stage 4 – Meter Management and Field Orders

In the final stage, meter management will be migrated and ownership of field order processing will become a CorDaptix function.

The Stage grouping was determined based on the following factors:

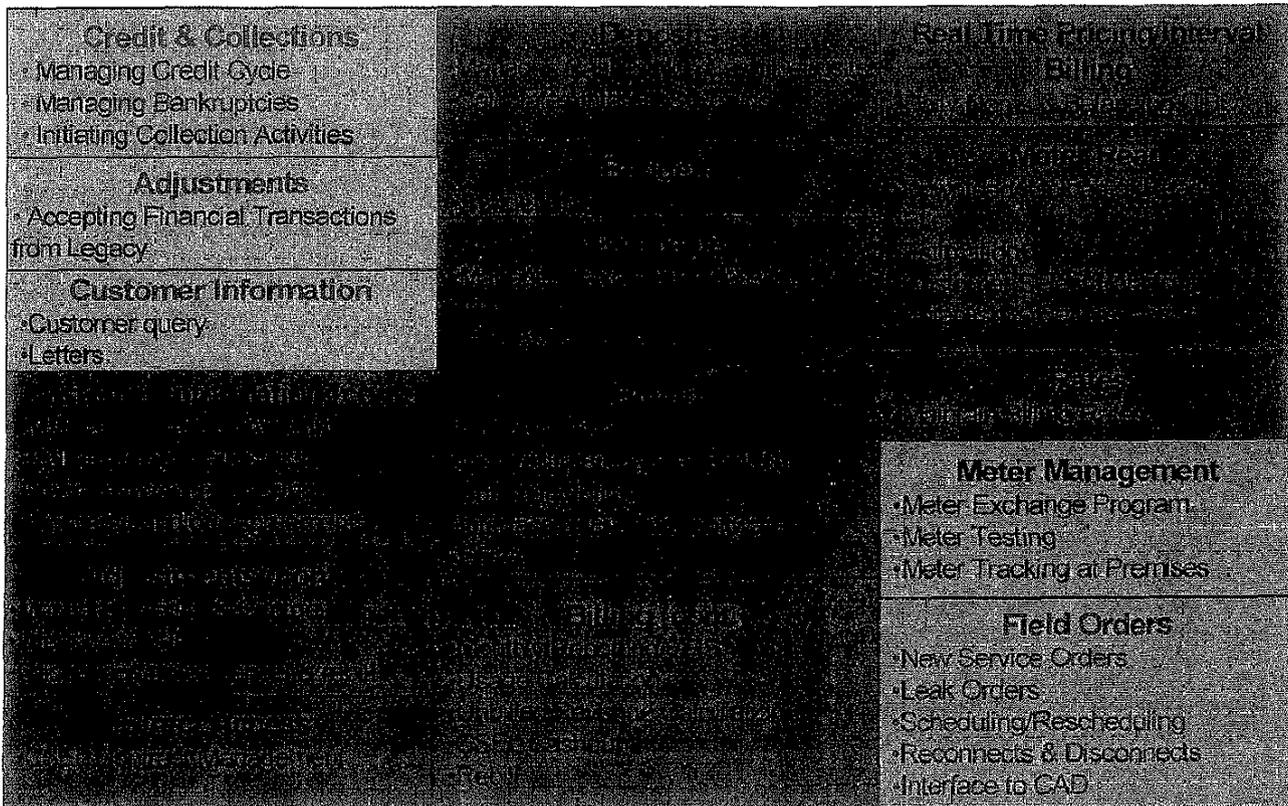
- Maximizing business value
- Minimizing business risk
- Minimizing overall costs
- Leveling overall costs across stages

Since these factors are not always in concert, and can even oppose one another, the goal was to determine the optimum **balance**. For example, maximum business value can be achieved through loading all key functionality up front, but that **would** also increase business risk; or costs could be evenly distributed across all stages, but overall costs would greatly increase as would business risk by maintaining dual data ownership.

## CIS Re-Engineering Model and Approach

### Functionality Mapping Model

To ensure that there is not any major functionality gaps or terminology differences, substantial effort went into mapping Nicor high level processes to the CorDaptix model. The following diagram summarizes and depicts those relationships.



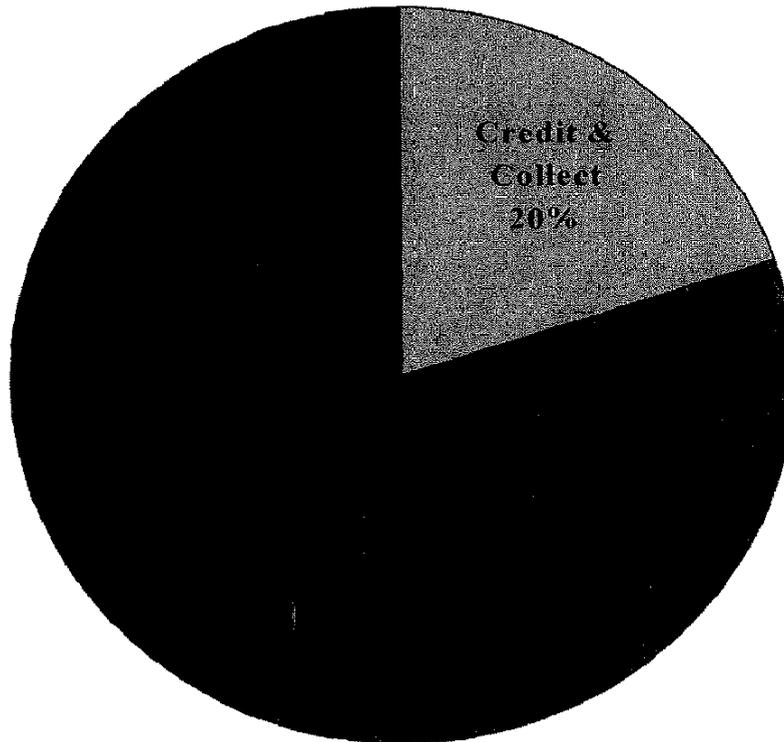
Bold are Cordaptix modules, Bullets are Nicor functionality encompassed in these modules, Coloring designates proposed stage.

The following graph represents the amount of functionality that will be implemented in each stage:

## CIS Re-Engineering Model and Approach

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# Percent Functionality by Stage



A brief analysis of each stage with the corresponding functional **component(s)** will follow with scenario overviews, legacy impacts, business impacts, assumptions and interfaces needed to accomplish this functional stage. Sections are also included in the approach document to address the systems that will remain on the **Unisys** and high-level conversion considerations. Since stage one is currently being implemented, detailed information is not included for this phase.

## CIS Re-Engineering Model and Approach

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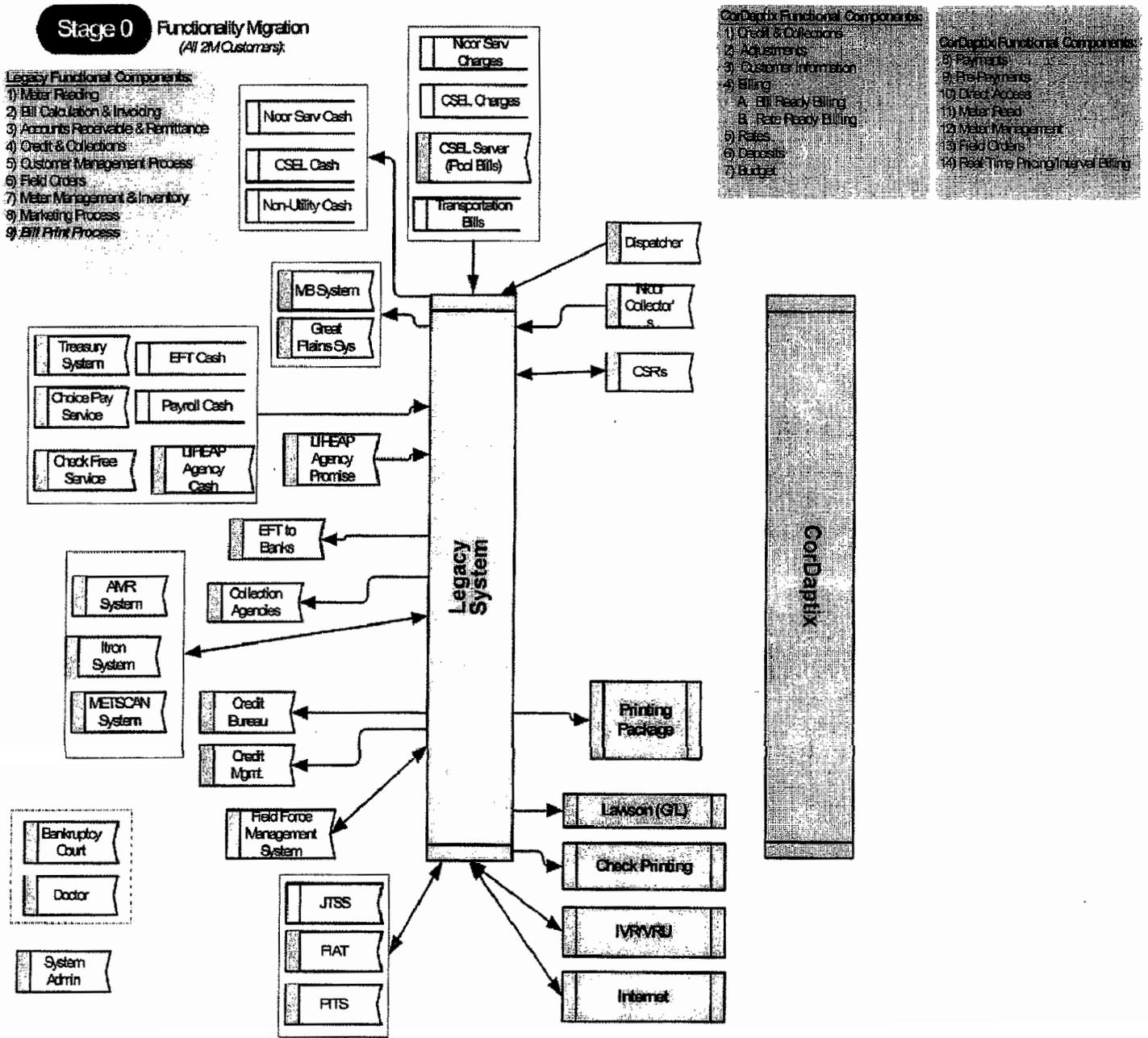
### Key Assumptions:

1. Current bill-print package software **seamlessly** interfaces with CorDaptix.
2. Complete package **will** be **available** from a licensing perspective to implement necessary functionality in the various stages.
3. Systems not encompassed within **this** project **will** remain on the Unisys. Development of interfaces to these systems will be included in this project and will be estimated at a very high level for purposes of this analysis.
4. As the default, industry standard **logic** built into CorDaptix will be utilized. Deviations from this will be noted.
5. The CorDaptix Pre-Payment and Real Time **Pricing/Interval Billing** modules will not be **implemented** in any stage.
6. Customer Select Pool Accounting will continue to remain on Legacy system
7. Transportation Billing (**SB**) will remain on the Legacy system.
8. The current scope of the Credit project will be implemented as scheduled,
9. **CorDaptix** can be modularized in accordance to our planned migration without comprising the integrity of the application or a large **amount** of **customization/plug-in** development.
10. Real time or near real time transactions **will** be **required** between CorDaptix and other business applications (legacy, replacement systems). This will introduce another layer of complexity and new **tools, including** the use of new interface protocols into CorDaptix (**XAI**). We will include an Enterprise **Application Integration (EAI)** tool in the **infrastructure/application** architecture.
11. Once stage 2 is implemented, disaster recovery needs to be in place, whether it be an alternate data center site of our own or a **3<sup>rd</sup>** party cold site.
12. Mercury related business issues and data issues are not addressed in the approach.
13. All Legacy interfaces to the Marketing systems need to be redirected to CorDaptix.
14. All client owned external databases, spreadsheets, and queries receiving data from the Legacy system used for miscellaneous activities need to be redirected to CorDaptix.
15. All Legacy reporting functionality will be migrated to CorDaptix.
16. CorDaptix releases must be considered in relationship to the implementation **timeline** of our Stages.
17. CorDaptix will be enhanced to handle multiple **cycle/routes** on a Service Point for meter reading downloads
18. CorDaptix will be enhanced to handle usage proration based on degree-days.
19. CorDaptix will be enhanced to handle billing every alternate month for a specific period (typically summer months) for specific customers.
20. **Carthage** area will be handled like any other **Nicor** area otherwise major modifications will be required to allow for business process exceptions.

# CIS Re-Engineering Model and Approach

## Stage 0 – Pre-CorDaptix Implementation

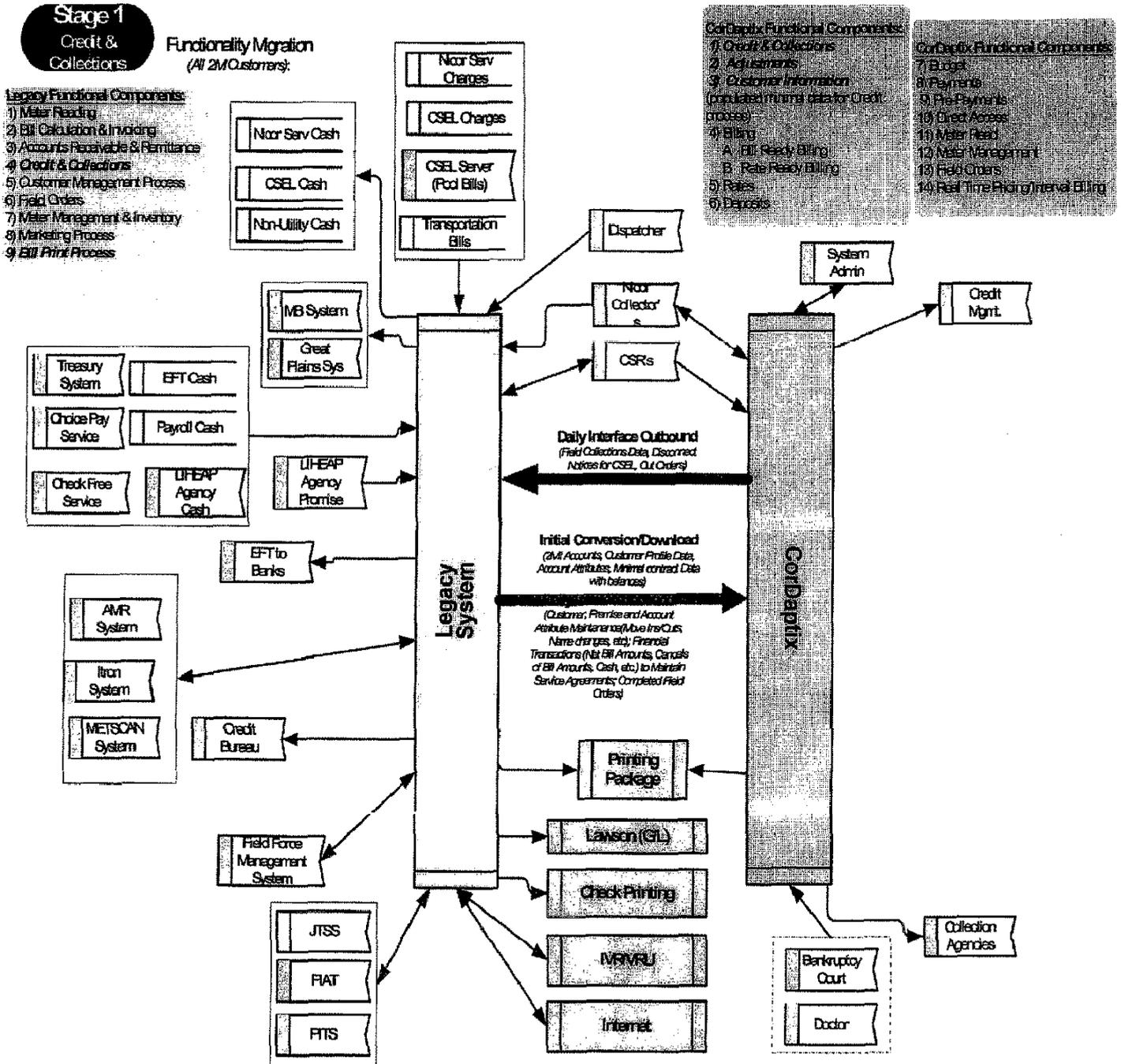
### Interface Diagram:



# CIS Re-Engineering Model and Approach

## Stage I - Credit & Collection Part 1, Adjustments Part 1

### Interface Diagram:



## CIS Re-Engineering Model and Approach

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### Functionality:

- CorDaptix functionality – Customer Information (partial, view only), Credit & Collection, Adjustment (partial, view only) components will be implemented in this stage.
- Legacy functionality – Part of Customer **Service** (CS), part of Credit (CR) will be migrated to **CorDaptix**, part of Revenue Accounting (RA) related to credit functionality will be migrated to CorDaptix.

### Process and Scenario Overview:

This stage will engage the Credit and Collection module of CorDaptix. The **Legacy** credit and collection processes migrating to CorDaptix includes the following – credit cycle activity, **servenece** and collection activity, collection **referral/agency** information activity, aging of delinquencies, credit rating, charge-off, collection letters.

### Interfaces:

#### Legacy Interfaces:

1. Send financial transaction (e.g. bill amount, payments, adjustments etc.) to CorDaptix.
2. Send customer/premise/account information (new & changed) to CorDaptix.
3. Communication between CorDaptix and Legacy system for credit related field orders (e.g. Cut-off, charge off, medical certificates, complaints etc.)

#### Non-Legacy Interfaces:

1. Collection Agencies need to communicate credit information with CorDaptix

# CIS Re-Engineering Model and Approach

## Stage 2 - Customer Information, Credit Part 2, Billing Part 1, Direct Access, Accounts Receivables

### Interface Diagram:

**Stage 2**  
Customer Information, Bill Ready Billing, & Direct Access

Functionality Migration  
(All 2M Customers)

CorDaptix Functional Components:

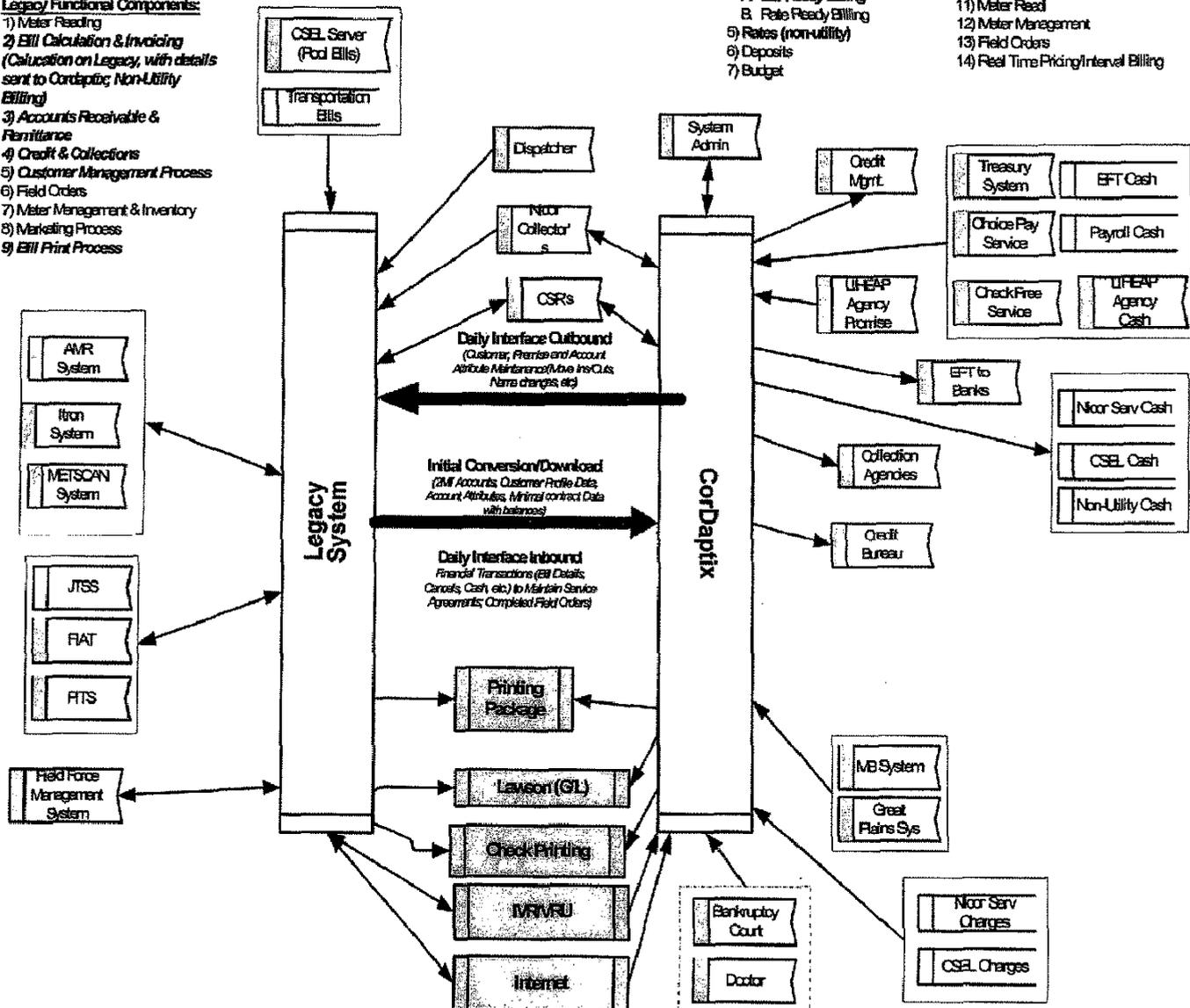
- 1) Credit & Collections
- 2) Adjustments
- 3) Customer Information
- 4) Billing
  - A. Bill Ready Billing
  - B. Rate Ready Billing
- 5) Rates (non-utility)
- 6) Deposits
- 7) Budget

CorDaptix Functional Components:

- 8) Payments
- 9) Pre-Payments
- 10) Direct Access
- 11) Meter Read
- 12) Meter Management
- 13) Field Orders
- 14) Real Time Pkging/Interval Billing

Legacy Functional Components:

- 1) Meter Reading
- 2) Bill Calculation & Invoicing  
(Calculation on Legacy, with details sent to CorDaptix; Non-Utility Billing)
- 3) Accounts Receivable & Remittance
- 4) Credit & Collections
- 5) Customer Management Process
- 6) Field Orders
- 7) Meter Management & Inventory
- 8) Marketing Process
- 9) Bill Print Process



## CIS Re-Engineering Model and Approach

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### Functionality:

- CorDaptix functionality – Functionality **from** Customer Information, Billing (Bill Ready Billing, Deferred Payment **Arrangements**), Rates (non-utility billing). Direct Access. Payments, Adjustments (Rework), Deposits, Budgets components **will** be implemented in this stage.
- Legacy functionality – Functionality **from** Customer Service (CS - partial), rest of Credit (CR), part of Revenue Accounting (RA), part of Customer **Select (CSEL)**, Nicor Energy **Services/Service** Contracts (SC), Miscellaneous Billing (**MB**), Great Plains (GP), Correspondence Tracking (CT), **CallBacks** (CB), Agent Payment (AG) will be migrated to CorDaptix.

### Process and Scenario Overview:

This stage will engage the Customer Information, Billing (partial), Rates (partial), Direct Access, Payments, Adjustments, Deposits, and Budgets. This stage will include data transfer of additional customer account information for customer management and calculated **billing** information for billing invoices (bill print). The Legacy processes migrating to CorDaptix includes the following - **A/R** and remittance process, non-utility billing (Customer Select, Nicor Service, summary billing, reading **posting/storage**, miscellaneous billing and billing through Great Plains system), and additional credit and collection functionality (deferred payment arrangements, deposits, energy assistance, budget plan, credit scoring, and late payment charge).

### Assumptions:

1. The **CSR's** are accessing **and** maintaining customer, **account**, and premise **information** in CorDaptix. This includes working **turn-ons** and turn-offs on the **CorDaptix's** system.
2. Emergency and **non-emergency** orders (**e.g.** meter exchanges, removes, leak calls, etc.) will be issued **from** CorDaptix whenever Field Orders are implemented or in Stage 4 (whichever **comes** first).
3. **CSR's** will answer all financial account-related questions from CorDaptix – billing, cash, adjustments, etc.
4. Deferred Payment Arrangements and Budget Plan setups will be done in CorDaptix.
5. CorDaptix will bill deposits.
6. CorDaptix will process refunds.
7. Bill calculation for all utility regulated charges will remain on the Legacy system.
8. All **non-utility** billing will be handled by CorDaptix, this **includes** Great Plains, Miscellaneous Billing (**MB**), and Nicor Services Billing (excluding Fixed bill).
9. CorDaptix will manage Customer **Select** Supplier Contracts and Billing.
10. CorDaptix will maintain and create supplier cash files.
11. CorDaptix will do bill consolidation, with the billing data formatted and interfaced to the Print Software (CSF).
12. Postage sorting software from CSF will be purchase for interaction with CorDaptix. If it **is** not purchased then current USPS **CRIS** code system will be used.

## CIS Re-Engineering Model and Approach

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13. CorDaptix will handle internal Skip Tracing process
14. Current billing, payment, and account maintenance functionality provided through Internet to customers should be provided through CorDaptix.
15. On-line generated customer letters will be generated from CorDaptix.
16. Meter reading reroute process will remain in the legacy system at this time.
17. Itron reads for all accounts will be sent to CorDaptix for storage and viewing.
18. Tracking of Correspondence & Call Back will be done in CorDaptix.
19. Nicor Services contracts will be set up & maintained in CorDaptix
20. Monthly financial reporting & journal entries for non-utility charges, adjustments and cash will be done from CorDaptix.
21. Monthly financial reporting & journal entries for utility charges will remain in Legacy
22. Billing related attributes maintained by CorDaptix need to be sent to Legacy.
23. All Legacy reporting functionality will be migrated to CorDaptix.
24. Transportation and Customer Select Pool Billing will remain on the legacy system.

### Business Impacts:

#### Billing Part 1 – Bill Ready:

- 9 transactions - The limitation to 9 transactions per bill will be lifted allowing flexibility, clarity and efficiency to the transaction process.
- Consolidated billing - Using the customer-centric model's capabilities, Nicor can offer consolidated billing for its customers with multiple accounts - increasing customer satisfaction.
- a Billing schedule – Meter reading will no longer be the primary driver for bill issuance. Nicor can tailor its billing schedule to other processes.
- Audit tracking – The new system can serve as another data verification tool – providing additional quality assurance to legacy data.
- Graphical user interface (GUI) screens – Overall, CSR training and time-to-competency should decrease.

#### Customer Information:

- Customer profile information – Presents the CSR with important customer information (i.e. multiple contact source history – call, mail, email, IVR, web, etc., services most likely to purchase, etc.) taking some of the "guesswork" away and increasing CSR morale and customer satisfaction.
- CSR and company staff training - Initial training and competency will require a learning curve – due to confusion toggling between two systems (SPL and legacy) and the extended usage of a computer mouse (mostly CSRs).
  - Program maintenance changes into production can be implemented in larger phases – decreasing training time
  - Major SPL system upgrades could significantly change CSR interfaces – increasing training time.
- Open architecture – Allows for quicker deployment of new business technologies (i.e. CRM technologies, ACD, CTI, ERMS, web self-service, etc.)
- BI's will be worked in Legacy.

## CIS Re-Engineering Model and Approach

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### Accounts Receivable:

- Payment types – Identifying various payment types enhance the user's knowledge and empowers them to more effectively resolve customer issues.
- Adjustments – Using adjustments to resolve specific billing issues instead of canceling and rebilling clarifies billing and enhances customer satisfaction.

### Impacts to Legacy & CorDaptix:

#### Legacy Impacts:

1. Create a new program to communicate field orders to Legacy, which are initiated by CorDaptix.
2. Decommission the bill printing programs.
3. Decommission the refund draft programs
4. Decommission the remainder of the **Credit** functionality – deferred payment arrangements, deposits billing, budget plan, skip tracing.
5. Turn off financial transactions interface from Legacy to CorDaptix, which is built for Credit & Collection.
6. Decommission disconnect notice file for CSEL suppliers.
7. Modularize the order appointment functionality and the estimated turn-on and turn-off business rules.
8. Remove modules creating letters to customers.
9. Decommission any legacy functionality now owned by CorDaptix, which is routed from the IVR system.
10. Decommission Legacy reports related to the functionality implemented in CorDaptix this stage.

#### CorDaptix Impacts:

1. Supplier and Customer relationships will have to be established in CorDaptix
2. Supplier Cash file management will be handled by CorDaptix.
3. CorDaptix will log journal entries for cash and adjustments to Lawson System
4. Create new letter templates to be utilized by the CSR for customer correspondence.
5. **Real** time interface for querying the legacy system for appointment confirmation and estimation eligibility.
6. Monthly financial reporting for adjustments and cash will be done from CorDaptix
7. New batch process to create "To Do's" for internal Skip Tracing account identification.
8. Handle transactions from the IVR system.

## CIS Re-Engineering Model and Approach

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9. CorDaptix will maintain and store meter reads. meter number and reroute information.
10. CorDaptix will need a plug-in modification for calculating finance charge on budget plan accounts.
11. CorDaptix **will** need a plug-in modification for calculating earn credit.
11. Create business unit reports from CorDaptix.

### Interfaces:

#### Legacy Interfaces:

1. Customer/account/premise data need to synchronize between Legacy System and CorDaptix
2. Billing details from Legacy (RA, SB. Nicor Services Fixed Bill) should be sent to CorDaptix Billing component.
3. Send meter number and meter reads to CorDaptix.
4. Any field orders initiated from CorDaptix as part of this stage need to have real time interface with legacy.
5. Results of field orders initiated from CorDaptix and captured in Legacy should be communicated back to CorDaptix.
6. Sends account number changes to CorDaptix.

#### Non-Legacy Interfaces:

1. Payments received through various mechanisms (e.g. Treasury, Payroll, Choice Pay, CheckFree. Credit Card, **FirstTech**, EFT etc.) should be sent to CorDaptix. Any set up activities related to these payment mechanisms should be handled through CorDaptix interface.
2. CorDaptix **will** create files for EFT customers, CheckFree, and Choice Pay.
3. CSEL Suppliers billing charges will be interfaced directly into CorDaptix.
4. CorDaptix will create Supplier Cash files.
5. The journal entries, for non-utility charges, cash and adjustments, will be generated and routed through CorDaptix to **Lawson** system.
6. CorDaptix will send the entire bill printing information to the Print Package (CSF).
7. Check printing interface should be enabled through CorDaptix.
8. Billing details, payment information, and some customer demographic details provided through internet today, will be managed through CorDaptix.
9. Account Maintenance **will** be enabled through the Internet.

## CIS Re-Engineering Model and Approach

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10. **Credit Bureau (e.g. Equifax)** need to be interfaced to CorDaptix for communication of Credit Scoring Information.
11. CorDaptix will interface with Print Package (CSF) for postage sorting functionality.
12. **IVR needs** to communicate to CorDaptix for account **queries**, deferred payment **arrangements (DPA)** setups, etc.
13. Bankruptcy Court interfaces with CorDaptix.
14. **External files** interfaced with Great Plains (GP), Miscellaneous Billing (MB) **will** need to be handle through **CorDaptix**.
15. CorDaptix will communicate customer letters, communications to Print Package (**CSF**).
16. Create disconnect notice files for CSEL suppliers.
17. **All** client owned external databases, spreadsheets, and queries receiving data from the Legacy **system** used **for** misceilaneous activities need to be redirected to CorDaptix.

# CIS Re-Engineering Model and Approach

## Stage 3 - Rate Ready Billing and Meter Reading

### Interface Diagram:

**Stage 3**  
Rate Ready Billing & Meter Reading

Functionality Migration  
(All 2M Customers):

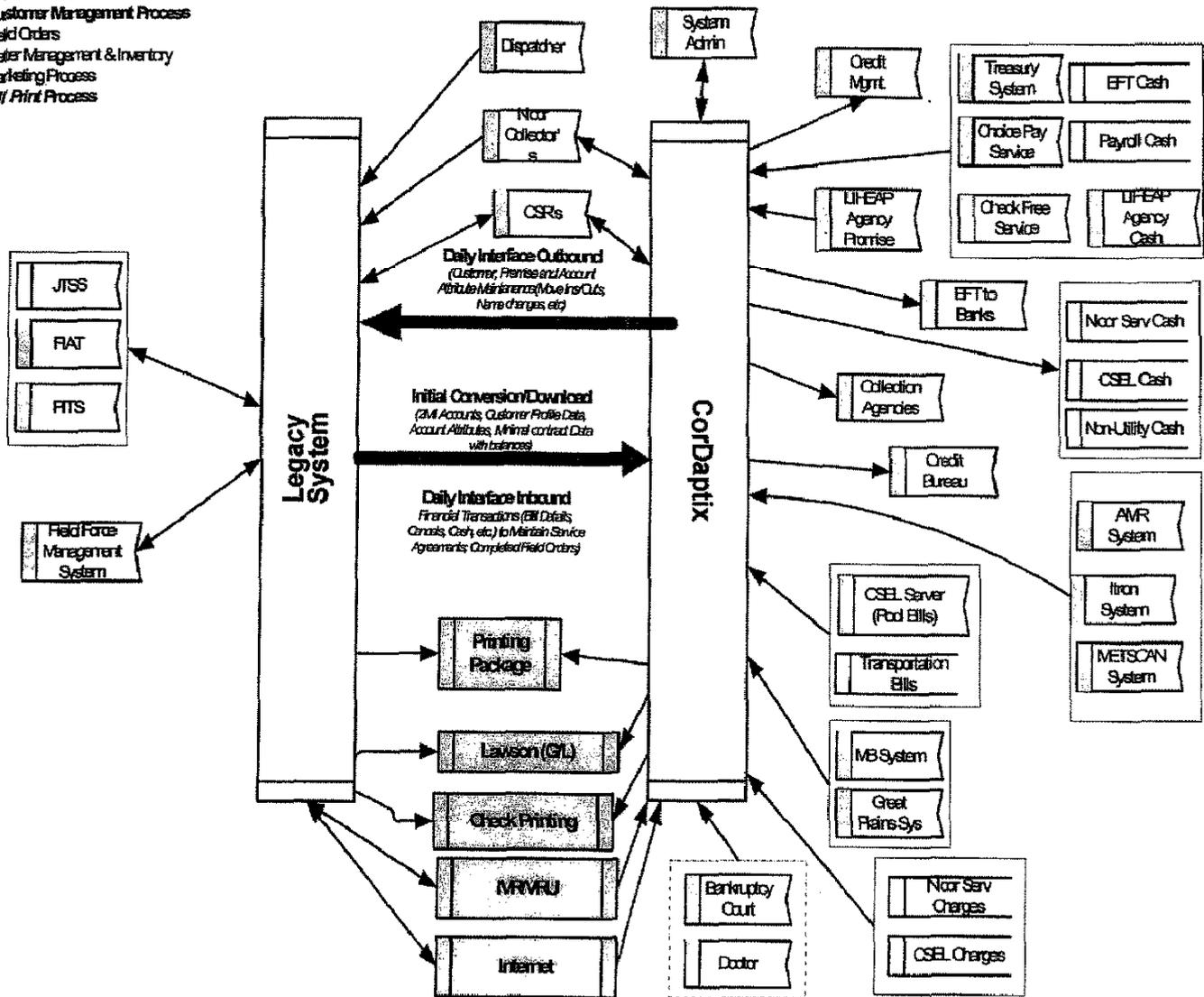
- Legacy Functional Components:
- 1) Meter Reading
  - 2) Bill Calculation & Invoicing
  - 3) Accounts Receivable & Remittance
  - 4) Credit & Collections
  - 5) Customer Management Process
  - 6) Field Orders
  - 7) Meter Management & Inventory
  - 8) Marketing Process
  - 9) Bill Print Process

CorDatix Functional Components:

- 1) Credit & Collections
- 2) Adjustments
- 3) Customer Information
- 4) Billing
  - A. Bill Ready Billing
  - B. Rate Ready Billing
- 5) Rates
- 6) Deposits
- 7) Budget

CorDatix Functional Components:

- 8) Payments
- 9) Pre-Payments
- 10) Direct Access
- 11) Meter Read
- 12) Meter Management
- 13) Field Orders
- 14) Real Time Pricing/Interval Billing



## CIS Re-Engineering Model and Approach

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### Functionality:

- CorDaptix – Rates (utility billing), Billing (Rate Ready Billing), and Meter Read components will be implemented in this stage.
- Legacy – Meter Read (MR), part of Meter Accuracy (MA), rest of Revenue Accounting (RA), Purchase Gas (PG), Bill Frequency (BF), Atmospheric Corrosion (AC), and Auxiliary Meter Reading (AM) will be migrated to CorDaptix.

### Process and Scenario Overview:

Billing Part 2 (Rate Ready). Bill Calculation and Meter Reading.

This stage will engage the Meter Reading and full Rates and Billing modules of CorDaptix. The Legacy process migrating to CorDaptix **includes the** following – usage calculation, bill calculation, state & municipal tax **calculation, unbill revenue calculation**; meter reading **upload/download**, exception handling, estimation of reads, dial card issuance, and factor establishment and refinement.

### Assumptions:

1. Franchise Gas accounts may have to be handled on the Legacy system first to split free from usage to be billed. (We might be able to do something in CorDaptix, need to pursue)
2. Meter upload & download will be handle through CorDaptix.
3. CorDaptix can capture code compliance results from ITRON system.
4. Revenue Accounting financial and usage reporting will be done from CorDaptix.
5. Municipal Tax reporting and reconciliation will be done from CorDaptix.
6. State Tax reporting and reconciliation will be done from CorDaptix.
7. Gas Supply Charge (GSC) reporting and reconciliation will be done from CorDaptix.
8. Daily bill calculation verification and balancing will be done from CorDaptix.
9. CorDaptix will issue Dial Card forms/letters.
10. Adhoc queries and reports will be generated from CorDaptix.
11. CorDaptix can trigger code compliance inspection to the ITRON system.

### Business Impacts:

#### Billing Part 2 (rate **ready/bill calculation**):

- New billing and payment processes - Quicker implementation due to the parameterized rate structure (i.e. Fixed Bill, Budget Plan, etc.)
- SPL capabiitiy questions - Franchise gas, transportation billing, GSC calculation, environmental cost recovery, etc.

## CIS Re-Engineering Model and Approach

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- Rate case - Evaluation and implementation are expedited due to SPL's open data architecture and parameterized rate structure.

### Meter Reading:

- Route management
  - ◆ **Ad-hoc** route re-sequencing and Meter Reader input must be handled manually for updates.
  - Route optimization system (future capability) will have a more streamlined integration due to the open architecture.
- Reading period - Period variability permits flexibility with reading and billing cycles.
- Estimating criteria - SPL's estimating model is simplistic in comparison to Nicor's. Further evaluation is required to determine SPL's estimating accuracy.

### Impacts to Legacy & CorDaptix:

#### Legacy impacts:

1. Decommission the meter read programs.
2. Decommission the Revenue Accounting (RA) batch programs
3. Decommission the CS batch programs interfacing with the RA system.
4. Decommission Legacy reports related to the functionality implemented in CorDaptix this stage

#### CorDaptix Impacts:

1. CorDaptix needs to handle **algorithm** to create Itron indicators for atmospheric corrosion and CORCON programs.
2. Create new modules, in CorDaptix, for generating the unbill-estimated usage for **both** CSEL cash out and unbill-revenue reporting for the monthly reporting.
3. CSEL Cash Out estimation functionality may be done on CorDaptix with a plug-in modification.
4. Need to reformat the Itron upload and download files.
5. Modify CorDaptix to process Me dynamic re-sequencing of routes done by meter readers,
6. Taxing and Franchise gas attributes will be setup as billing and premise characteristics,
7. Franchise Gas processing will require a plug-in modification.
8. **Need to** establish and **setup meter** reading schedule.
9. Handling of summer billing and year round bi-monthly billing, and monthly is a function gap in **CorDaptix**. Perhaps establishing different routes and cycles can be done with a plug-in.
10. Monthly accounts meter reading scheduling is a big gap in CorDaptix. Perhaps establishing different routes and cycles **can** be done with a plug-in.
11. CorDaptix **will** need to be modified to handle factor establishment and refinement.

## CIS Re-Engineering Model and Approach

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12. Meter Reading exception handling & reporting will be done from CorDaptix.
13. CorDaptix needs to handle estimation and pro-ration using degree-days.
14. Monthly financial reporting and journal entries will be done from CorDaptix.
15. Create business unit reports from CorDaptix.

## CIS Re-Engineering Model and Approach

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### Interfaces:

#### Legacy Interfaces:

1. Transportation reading data to Legacy system (SB).
2. CorDaptix will send code compliance results received from ITRON system to Code Compliance System.
3. CorDaptix will send code compliance triggers to ITRON for CORCON program.
4. Filed reads will be sent to CorDaptix through Legacy.
5. CorDaptix will process a file from SB with the usage allocation to apply charges.
6. Atmospheric & Corrosion Control Results to Legacy System

#### Non-Legacy Interfaces:

1. CorDaptix will be able to upload/download meter read & code compliance information to ITRON.
2. All AMR, IVR, MetScan, Dial Card, Internet reads will be interfaced directly into CorDaptix
3. Interface with Municipalities for water meter reads. May not be required if we are not supporting water meter reads in future.
4. CorDaptix will generate supplier usage files and send it to suppliers.
5. CorDaptix will process the meter reading re-sequencing information from ITRON.
6. Interface to Lawson for all financial reporting.
7. All client owned external databases, spreadsheets, and queries receiving data from the Legacy system used for miscellaneous activities need to be redirected to CorDaptix.

# CIS Re-Engineering Model and Approach

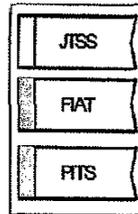
## Stage 4 - Meter Management, Field Orders

### Interface Diagram:

**Stage 4  
Meter Management  
& Field Orders**

- Legacy Functional Components:
- 1) Meter Reading
  - 2) Bill Calculation & Invoicing
  - 3) Accounts Receivable & Remittance
  - 4) Credit & Collections
  - 5) Customer Management Process
  - 6) Field Orders
  - 7) Meter Management & Inventory
  - 8) Marketing Process
  - 9) Bill Print Process

Functionality Migration  
(All 2M Customers):

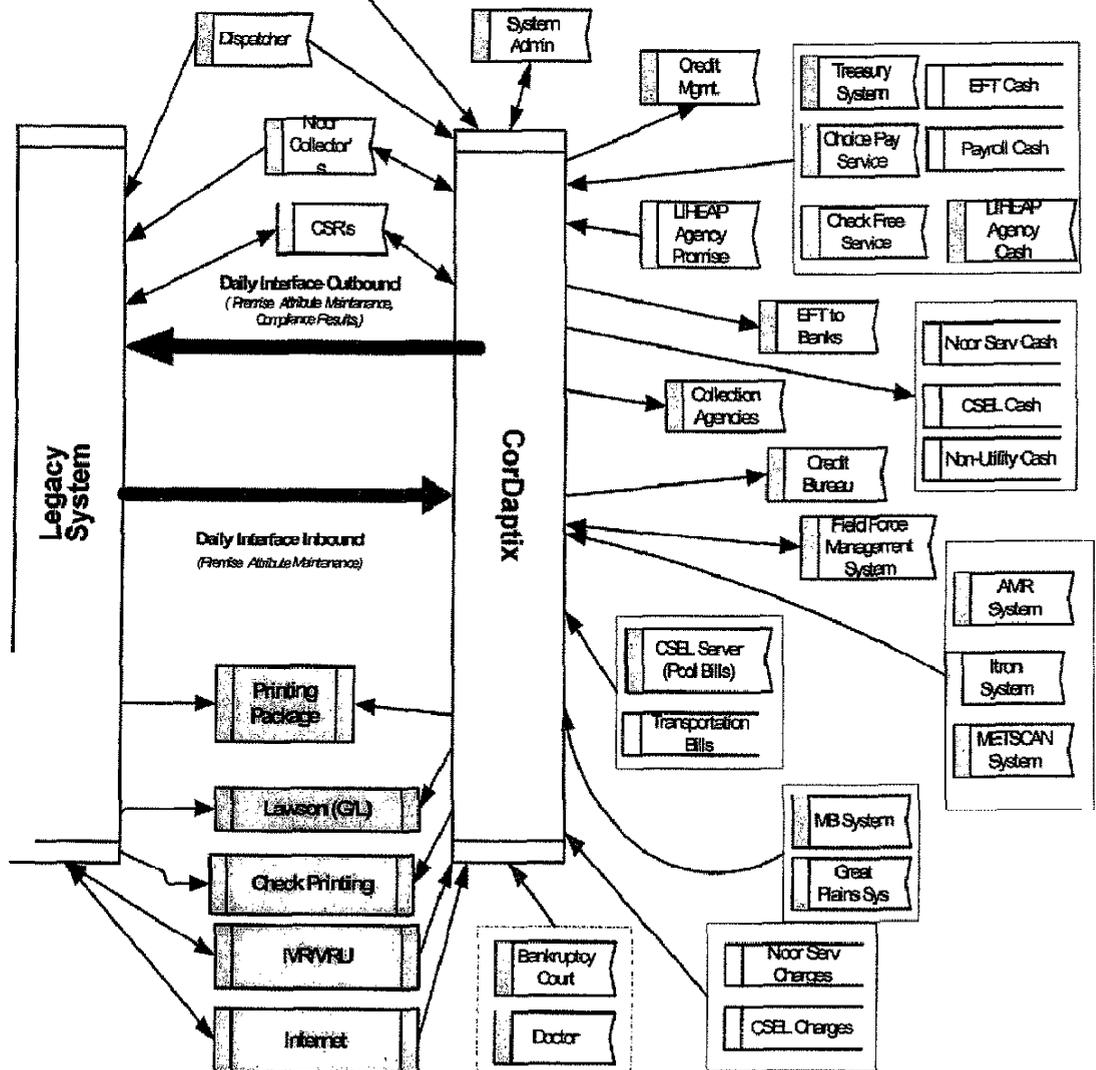


CorDaplix Functional Components:

- 1) Credit & Collections
- 2) Adjustments
- 3) Customer Information
- 4) Billing
  - A. Bill Ready Billing
  - B. Rate Ready Billing
- 5) Rates
- 6) Deposits
- 7) Budget

CorDaplix Functional Components:

- 8) Payments
- 9) Pre-Payments
- 10) Direct Access
- 11) Meter Read
- 12) Meter Management
- 13) Field Orders
- 14) Real Time Pricing/Interval Billing



## CIS Re-Engineering Model and Approach

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### Functionality:

- CorDaptix – Meter Management and Field Orders components will be implemented in this stage.
- Legacy – Field Orders (CS/CD/OP) and part of Meter Accuracy (MA) will be migrated to CorDaptix.

### Process and Scenario Overview:

This stage will engage the Meter Management and Field Order modules of CorDaptix. The Legacy processes migrating to CorDaptix will include the following - define and track meters and equipment, manage device testing program, and equipment relationships; dispatch, schedule, and maintain field order activities.

### Assumptions:

1. Managing of offpremise meter inventory will remain on the Legacy system.
2. Managing of off premise meter devices (i.e. AMD, device Download valve, vaults etc) will remain on Legacy System.
3. Field Order activity will be handled by a new Field Force Management System and implementation of new CAD system should coincide with implementation of this stage to minimize field order rework.
4. The Nicor meter management testing and sampling functionality will comply with the CorDaptix standards.
5. New service process of setting up premises will remain on the legacy system up through initial meter install.
6. CorDaptix will support the Nicor concept of can't find orders for gas emergencies, locating (JULIE), landscaping & paving orders.
7. Emergency response, CGI safe statistics and reporting will be done from CorDaptix.
8. Field Force Management system will support field order criteria implemented in CorDaptix.
9. Availability of field orders will be handled outside of CorDaptix.
10. Field Force Management system (new CAD) will determine appointment availability, prioritization and distribution of field orders.
11. Management of service point materials will be handled by Legacy or future GIS system.
12. Adhoc queries and reports will be generated from CorDaptix.

### Business Impacts:

#### Field Orders:

- Industry standard work codes - Migrating Nicor's work codes to the industry standards creates immediate clarity and future flexibility for the business - esp. simplifying the Distribution Area migration.  
Customer Centric field activity views - Presenting a comprehensive view of ALL field activities provides a consolidated knowledge base for users (CSRs, clerks, etc.) - enhancing customer satisfaction and eliminating CSR frustration.

## CIS Re-Engineering Model and Approach

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- To **Do's/workflows** - Streamlines work processing flows to the Meter Shop, System Operations, Pressure, etc.
- Systems not in scope - **The** CM and SP systems will remain on the legacy system causing potential integration issues and added business function complexities - toggling between systems.

### **Meter** Management;

- To **do's/workflows** -Automating existing manual processes by using CorDaptix To Do functionality will enhance productivity and will require new technical skills to be acquired.
- Lot **failure** forecasting - Building this pro-active planning process on **CorDaptix** will avoid significant cost of building on our legacy system and will **allow** Nicor to more effectively distribute its workload.
- CorDaptix meter sampling need to be changed to conform to current Nicor sampling program.

### Impacts to Legacy & CorDaptix:

#### Legacy Impacts:

1. Outage sub system will remain in legacy and will require extensive modifications.
2. Legacy functionality migrated to CorDaptix need to be decommissioned.

#### CorDaptix Impacts:

1. The Service Pipe (SP) will be linked to Legacy or a **GIS** package.
2. Business rules for routing **Field** Orders to **ITRON** or Field Force Management System should be implemented in CorDaptix.
3. Need to track and maintain tagging of appliances & piping.
4. Reported leaks need to be tracked.
5. Create business unit reports from **CorDaptix**.
6. Dummy premise set up will **be** used to support Nicor concept of can't find orders.

## CIS Re-Engineering Model and Approach

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### Interfaces:

#### Legacy Interfaces:

1. Need to send premise, service point, and meter information to Legacy for meter management functionality.
2. Need an interface to Automatic Leak Recording (AL).

#### Non-Legacy Interfaces:

1. Need to interface with Field Force Management System (new CAD) on real time basis for scheduling orders.
2. Need to interface with JTSS for distribution orders. May need to change some aspect of JTSS
3. interface with IRTM/JULIE for locating gas lines.
4. Interface with LRS system for scheduling certain **code** compliance orders,
5. Need to interface with access database, spreadsheets. Monarch software for **miscellaneous** activities used for analysis.
6. **CorDaptix** will need to **communicate** with new Meter Management system or existing system on Legacy.
7. Interface with Legacy, or future **GIS**, to maintain Service Pipe relationship.
8. All client owned external databases, spreadsheets, and queries receiving data from the Legacy system used for miscellaneous activities need to be redirected to **CorDaptix**.

## CIS Re-Engineering Model and Approach

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### Conversion

#### Conversion

The conversion is a process of taking data used by an existing application and putting it into a format to be used by the new application. This process **also** ensures that the data is clean when the new application **receives it**.

There **are four major** areas of conversion that will need to be addressed **in** each stage of the CIS **migration**. Within each area a decision **will need to** be made to determine which **choice is the best fit for the** stage that the conversion is in. The areas are:

- Data Cleansing
- Conversion **Framework/architecture**
- Data Identification and Acquisition
- Validation

#### Data Cleansing:

This process often becomes tied to the conversion process. It is not only the effort to move the data **to** the new location. but also to ensure that quality data being moved. This can be in done through two approached a Push or Pull architecture.

**Push Architecture** – In this approach, the existing system (**s**) become (s) responsible for regular maintenance of its data. The existing architecture is responsible for **regular** maintenance of its data. Regular maintenance is significant and this includes thorough analysis and **repair** of the dirty data and business rules in the **existing** code. However, data quality is assured and is performed in the correct place. Conversion expects **to receive clean** data and **becomes a straightforward combination** of mapping and translation data directly to corresponding data and of unambiguous, reasonable mapping and transformation algorithms to the new system data and structures.

**Pull Architecture** – In this approach, the existing **system(s) do(es)** little or no maintenance on it's data. Conversion receives dirty data and performs the cleansing as part of the business rule mapping and **translation**. Conversion assumes the responsibility for the data quality. Conversion **mapping and transformation** complexity and execution time increase because of the nature, quality, and volume of cleansing. Interface can use some of the conversion **rules**, but also inherits the same execution time **concerns** transferred by conversion.

Since the legacy system can not guarantee that it contains clean data, we recommend that a **pull** architecture is used. This pull architecture will ensure that clean data is being brought into the system. It will slow down the execution time of the conversion programs, but it will ensure data integrity.

#### Data cleansing categories –

- On going maintenance – clean-up and continuing maintenance of existing DMS **II dataset** records, linkages and orphans.
- Outside **Vendor/Package** data scrubbing - task associated with researching vendor **services** that provide scrubbing of demographic data.
- Duplicate data – when multiple occurrence of the save data across different **dataset/files/storage** locations.
- Data clarification/**Separation**
  - **Separation** of attributes with domains used for different purposes. Attributes with code **values** are a prime target.
  - Separation of attributes with **multiple** fields within in one field. (i.e. bytes 1-2 mean “x”, Bytes 3 -7 mean “y”)
  - Separation of **attributes** with dependencies on other attributes such as status codes and **sub-codes**.

## CIS Re-Engineering Model and Approach

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- **Outdated/Unused** Attributes – identify and evaluate the data that may have no fundamental meaning to the business.
- Data Reconciliation – validating the use of data with the business requirements.
- Default **data/Data Correction/Missing** Data Elimination – identify the business rules for assigning default values, **correction** or amending existing values, or create new data, codes, or values for data resulting from new business requirements or data required by the system.
- Data Quality and Standardization – remove duplicate occurrences of data, and standardize data naming and usage.
- Ongoing Maintenance – removal of orphan records and repair to legacy.

### Conversion **Framework/Architecture:**

The architecture to be used for conversion, both in terms of environment and tables to be built will need to be established for all phases of the project. The conversion architecture will fit into the overall technical architecture. This architecture should be established up front. It should consist of rules on how the data should be **pasted/cleaned**, how the tables should be **designed/built** and what the target environments should be built.

### Data identification and Acquisition:

This is the process of determining the **sources(s)** of data from which the **conversion** will map and transform can mean different things in different environments. In different stages, this can translate to anything from accessing data from multiple sources to performing a number of data cleansing tasks defined to determine which data is the most reliable. The data acquisition becomes the physical process of collection the data determined in the identification step to be used by the conversion.

### Validation:

There are four steps to the validation process. They are:

- Validate Mapping
- Validate Program Code
- Validate **QA** Test Results
- Validate Conversion Process

Validate Mapping - documenting how the data's to be converted from the existing system files to the target system tables.

Validate Program Code – validate that any code produced will meet the conversion rules.

Validate **QA** Test Results –validate what test cases need to be established and what the expected outcome of the test cases should be.

Validate Conversion Process –validate with a system test that the data is correct. Also monitor the results for a period of time.

## CIS Re-Engineering Model and Approach

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### Systems that will remain on Legacy are:

After the implementation of the four stages previously outlined the following systems will remain on Legacy, or will require migration to another standalone system:

- Partial Field Orders (CD)
- Development Section (DS)
- Partial Meter **Accuracy** (MA)
- Plant Accounting (PL)
- Labor Distribution (LD)
- Service Pipe (**SP**)
- Special Billing (**SB**)
- Partial Pool Accounting (PA) – Client Server (PA)
- Construction Maintenance (CM)
- CORCON
- Customer **Information** (CI)
- Outage
- Automatic Leak Recording (AL).

### Glossary:

|      |   |
|------|---|
| AC   | - Atmospheric Corrosion                       |
| ACD  | - <b>Automatic</b> Call Distributor           |
| AL   | - <b>Automatic</b> Leak Recording             |
| BI   | - <b>Billing</b> Investigation                |
| CAD  | - Computer Aided Dispatch                     |
| CD   | - Code Compliance                             |
| CRM  | - Customer Relationship Management            |
| CTI  | - Computer Telephony Integration              |
| CSeI | - Customer Select                             |
| ERMS | - <b>Email</b> Response Management System     |
| JTSS | - Job Tracking Scheduling System              |
| PITS | - Pressure <b>Information</b> Tracking system |
| RA   | - Revenue Accounting                          |
| SB   | - Special Billing                             |

## CIS Re-Engineering Approach Document

### Executive Summary:

The CIS **Re-Engineering** Model and Approach document **details** the recommended approach to implement **the CorDaptix** CIS application suite. The model and approach document will **initially** be **utilized** to develop the project cost **model** and business case. Once the project is approved, it will be the initial input for the in-depth analysis for the next stage following **the successful** implementation of Credit.

### **History**

Since 1968 Nicor Gas has utilized a legacy **billing** system **referred** to as **the** Revenue Accounting System. For over **six** (6) years several committees **and** outside consultants have studied the viability of these systems and several options have been explored to **replace** it. **Substantial** time **and** effort were expended evaluating and **beginning** to pursue a **full** CIS Implementation (big bang), but the scope and cost **grew** to **unacceptable** levels and the project was abandoned. Following that decision, a committee consisting of **several** key Nicor **Gas** personnel evaluated three options for replacing the systems. Option one was purchasing a package and functionally migrating to it. Option **two** was outsourcing the billing function to a **service** bureau, and option three **was** to leave the existing system in place and stabilize and **re-engineer** key components to **make** it through the next five years while **unbundling** unfolded.

In November of **1999** it was **determined** by the Senior Sponsorship Team to pursue option three, the Stabilization & Re-Engineering alternative. It was determined that this alternative would position Nicor Gas to meet **unbundling requirements** on the **upcoming horizon**, while **improving** the IT **infrastructure** and **capabilities**. This project was approved in **1999** and came to be **known** as the Customer Care **Information** Systems Project (CCISP). *It was also understood at this time that the decision to replace the w e n t CIS systems was only delayed and not eliminated.*

A **group** of the **tasks** within the scope of CCISP were written to address insufficiencies with the legacy Credit applications. The **functionality** of the current system can be described as one-size fits all and it has been unable to keep up with the changing and growing business unit requirements. Several options were explored before **making** the decision to evaluate package solutions in July of **2000**. Based on the final vendor criteria evaluations, **SPL WorldGroup's** product **known** as **CorDaptix** **was** selected as the best option for Nicor based on **the** following key reasons:

- Meets **all** core business requirements
- Aligns with technology industry **standards**, provides more mature product and associated support tools
- Contains **full** suite of product offerings that Nicor can leverage for future phases

After the selection was finalized a fit assessment was completed in August of 2001 **and** the development effort was initiated in November of 2001. The Credit project is scheduled to be implemented in September of 2002.

Based on the results of the Credit and Collections Fit Assessment and an overall analysis of the future direction of CCISP, the CCISP project mission was changed to reflect the following:

- Enabling the necessary functionality for full unbundling
- **Positioning Nicor Gas to aggressively replace RA components**
- **Providing an anchor for a Customer Centric database and infrastructure**

**Though** many of the components of the original mission stayed intact (i.e. prepare for unbundling) much of the **re-engineering tasks** were canceled or substantially modified under the premise that Nicor would **continue to implement CorDaptix**, replacing the **billing** systems and **related CIS** components within a 3-4 year window.

## CIS Re-Engineering Approach Document

### Approach *Summary*

The following chart represent the four different migration approaches Nicor could take to **implement** the **remaining** Components of **CorDaptix**. After evaluating the Pros and **Cons** of each alternative, **the Functional Migration** approach is most feasible **for Nicor**. It supports the course **Nicor has** taken in implementing large initiatives, **and** is **in** line with the current **modularization** efforts the CIS **software** companies are taking with their application suites.

## CIS Re-Engineering Approach Document

| Implementation Type  | Pros   | Cons  |
|----------------------|--|---|
| Big Bang             | <ul style="list-style-type: none"> <li>• Least costly <b>overall</b> solution</li> <li>• Minimizes data synchronization issues</li> <li>• Benefits are realized sooner</li> </ul>  | <ul style="list-style-type: none"> <li>• High one time investment</li> <li>• Extreme change impact to organization</li> <li>• High <b>business risk</b></li> </ul>  |
| <b>Geographical</b>  | <ul style="list-style-type: none"> <li>• Change <b>impact</b> to the organization <b>can</b> be managed</li> <li>• Manageable <b>business risk</b></li> </ul>  | <ul style="list-style-type: none"> <li>• <b>All functionality</b> must be <b>implemented</b> in the first phase</li> <li>• High <b>one</b> time investment</li> <li>• <b>High</b> Change impact to the organization can be managed</li> <li>• Multiple <b>processes/reporting</b> structures for same customer types</li> </ul>               |
| Customer Type        | <ul style="list-style-type: none"> <li>• Manageable business risk</li> <li>• Change impact to the organization can be managed</li> </ul>   | <ul style="list-style-type: none"> <li>• Most functionality must be implemented in the first phase</li> <li>• High one <b>time</b> investment</li> <li>• Medium to high change <b>impact</b> to the organization</li> </ul>   |
| Functional Migration | <ul style="list-style-type: none"> <li>• <b>Allows</b> for checkpoints to stop and evaluate moving forward</li> <li>• Change impact to the organization can be managed</li> <li>• Investment can be spread over 3-4 year period of time</li> <li>• <b>Allows</b> for an orderly <b>modifications/replacement</b> of <b>ancillary</b> systems.</li> </ul> | <ul style="list-style-type: none"> <li>• Highest cost solution</li> <li>• <b>Development</b> of "temporary interfaces"</li> <li>• Multiple data conversions</li> <li>• Data synchronization issues</li> <li>• Heavy reliance on new interfaces between two or more <b>systems</b></li> <li>• Users will <b>work</b> on two systems</li> </ul> |

An important issue that needs to be stated is that we will not move all of **the Unisys** applications to the new platform **within** the scope of this project. We will still have to rely, although to a much lesser **degree**, on our **current mainframe** for applications that are not covered by the **CorDaptix** functionality. The major systems **that will** remain on the **mainframe are** noted **in** this approach document.

Following **are** the recommended **migration** stages that are outlined in this document:

### Stage 1

This stage, which is currently being implemented, enables the credit and collection **functionality** of **CorDaptix** and loads basic customer information for all customers and **allows** view only access and limited adjustment capabilities.

CorDaptix modules:

- Credit **and** Collections
- Customer **Information** (Partial)
- Adjustment (Partial)

### Stage 2

In the stage, ownership of customer information is transferred to CorDaptix. All billing and **financial** transactions are passed **and** stored in CorDaptix (Bill Ready) and CorDaptix will handle all **non-utility**

## CIS Re-Engineering Approach Document

billing. In addition, credit functionality not included in the scope of Phase One will be implemented in this phase.

CorDaptix modules:

- \* Customer **Information** (Partial)
- \* Billing [Bill Ready)
- \* Accounts Receivable and Remittance Process
- \* Direct Access
- \* Deposits
- \* **Adjustments**
- \* Payments
- 4 Rates (Partial)

### Stage 3

In **this** stage the meter reading components will be **transitioned** and ownership of **bill** calculation will be **transferred** to CorDaptix.

CorDaptix modules:

- \* Rates
- \* Meter Read

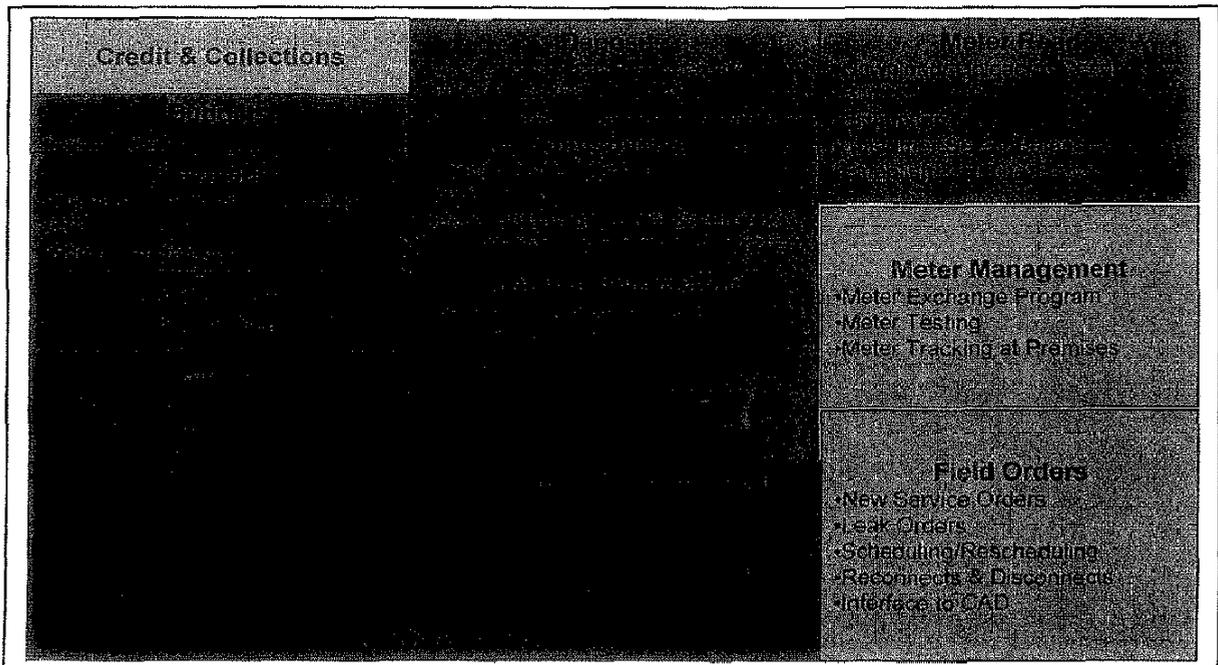
### Stage 4

In the **final** stage, meter management will be **migrated** (excluding meter inventory) and ownership of field order processing will become a CorDaptix function.

CorDaptix modules:

- Field Orders
- \* Meter Management

To ensure that there is not any major **functionality** gaps or terminology differences, substantial effort went into mapping **Nicor** high level processes to the CorDaptix model. The following diagram summarizes and depicts those relationships.



## **CIS Re-Engineering Approach Document**

A brief analysis of each stage with the corresponding functional component(s) will follow with scenario overviews, legacy impacts, business impacts, assumptions and interfaces needed to accomplish this functional stage. Sections are also included in the approach document to address the systems that will remain on the Unisys and high level conversion considerations. Since stage one is currently being implemented, detailed information is not included for this phase.

## CIS Re-Engineering Approach Document

### Key Assumptions and Facts

1. Current bill **print** package **software seamlessly** interfaces with **CorDaptix**.
2. Complete package **will** be available **from** a licensing perspective to implement necessary functionality in the various stages.
3. Applications not **encompassed** within **this** project will remain on the **Unisys**. Development of interfaces to these systems will be included in this project and will be estimated at a very high level for purposes of this analysis.
4. As the **default**, industry standard logic built into **CorDaptix** will be utilized. Deviations from **this** will be noted.
5. CSEL - **Pool** Accounting will continue to remain on the legacy application. The Interface between Pool **Accounting** and CSEL for gas nomination is not included in any phase.
6. The **CorDaptix** Pre-Payment and Real Time **Pricing/Interval** Billing modules will not be implemented in any phase.
7. The current scope of the Credit project will be **implemented** as scheduled.
8. **SPL can** be modularized in accordance to our planned migration without comprising the integrity of the application or a large **amount** of **customization/plugin development**.
9. Real time or **near** real time transactions will be required between **CorDaptix** and **other** business applications (legacy, replacement systems). **This** will introduce another layer of complexity and new tools, including the use of new interface protocols into **CorDaptix (XAI)**. We will include an Enterprise Application Integration (**EAI**) tool in the **infrastructure/application architecture**.
10. Once stage 2 is implemented, disaster recovery needs to be in place, whether it be an alternate **data** center site or our own or a 3<sup>rd</sup> party cold site.
11. Mercury related business issues and data issues are not addressed in the approach.
12. **Marketing** functionality has not been considered and **interfaces/migration** of the **Unique** system will need to be addressed at a future point.

# CFM BECOMES N'ABLE

BOARD MEETING  
MARCH *30, 2003*

**NICOR GAS COMPANY****BOARD OF DIRECTORS****PROJECT REVISION****Budget Item No. 8997 – IT Capital Project**

Revision of the Capital investment costs associated with the Field Force **Management**/CIS Migration Project – upgrade and expand **field** force mobilization hardware **and** scheduling software, Implement corresponding CIS software to support the Call Center. This project improves reliability of field response and provides the call center with visibility to all field operations for improved customer call handling. This continues the CIS software migration begun in 2001.

Revision reflects a change in the implementation **thing** **from** a 4 ½ year project to a 3 ½ year project. Overall project expenditures are not expected to change.

Original Authorization    \$15,000,000

Revised Authorization    \$17,300,000

Customer Care & Field Force Management Program  
Accelerated Timeline Benefits

The following is a list of potential Nicor benefits by accelerating the implementation timeline and providing higher annual funds for the CFM program.

- ❖ ***Less Customization to base package***  
 An accelerated timeline would put us in a position to implement the SPL package in one more step rather than two. A functional migration approach by its very nature indicates that the software package will be implemented in pieces/phases. While we were successful in this effort in phase 1 (Credit), the package modifications that are required to delay implementation of the billing modules will be much more significant. While SPL believes this can be accomplished, it does carry the most significant risk for this project. And we will be dependent on them to determine how to do it.
- ❖ ***Less risk to the customer***  
 Implementing the SPL package in its natural form will carry less risk than splitting it up. The largest risks to billing system projects generally relate to customization. Implementing SPL with significantly fewer modifications carries less risk.
- ❖ ***Less Back-office Impact***  
 A functional migration approach will have the back-office staff "living in two worlds" - Legacy and SPL. Most financial transactions will still be owned by the legacy systems between phase 2 and 3 -approximately 2 1/2 years. During this time, business processes will be performed across multiple platforms. The call center will be impacted by this as well.
- ❖ ***Less Testing Required***  
 Significantly less testing is required for several reasons: a) Less modifications to the package; b) impact to legacy systems will occur once, not twice; 3) Elimination of Do no Harm testing for Billing; and d) One set of tests rather than two (Integration, Operational Readiness; Stress Tests). These set of tests will be longer than any one phase, but still significantly less than the effort for two phases.
- ❖ ***Timing of Billing Benefits improved***  
 Flexibility in providing additional billing services and better support of Nicor's growth initiatives can be achieved two years earlier.
- ❖ ***Downsizing of Unisys benefits can be achieved several years earlier***  
 Downgrading of the Unisys mainframe can occur when the legacy billing system is moved to the new platform. Using the current scenario this would occur in 2007 - too late to achieve a downsizing in the 2005 negotiations with

Unisys. An accelerated **timeline** could provide over \$1.2 million savings annually beginning in 2006 rather than 2011.

- ❖ Data **Integrity** is improved  
Significantly less data synchronization will need to occur. Storing information in only one place is always advantageous. Under a functional migration approach - significant data will need to be transferred to the mainframe and then back again to SPL in order to keep customer and billing information synchronized.
- ❖ Reduced "throw-away" code  
Thousands of days will be spent in a functional migration approach build components which will only be utilized during the interim periods. This effort is eliminated in an accelerated approach.
- ❖ Less Overhead  
A three year program carries less overhead costs than a 4 1/2 year program.
- ❖ Less Potential outside **impacts**  
A shorter **timeline** eliminates any external influences from affecting the program plans by **1 1/2** years.
- ❖ Greater flexibility in delivery of components  
Higher annual funding will give the program greater flexibility to complete and deliver components along the way. This will be especially beneficial in the procurement and roll-out of mobile hardware.
- ❖ A shorter **timeframe** reduces **overall** risk  
A fixed bid risk profile is always less if the horizon is three years versus five years. The locking in of rates is more certain and should reduce our partner's unknowns.
- ❖ **Impact** to internal people is higher  
With an accelerated **timeline**, more employees will be impacted simultaneously. **Nicor's** strong focus on change management is positioned to address this issue and we are confident that this risk can and will be mitigated.
- ❖ Bottom-line - **Reduced** risk and lower costs  
A reduction of 5,000 to 10,000 days will reduce overall cost by \$5-10 million. And the overall risk profile goes down. The offset is a higher per year expenditure of approximately \$3 1/2 million.

FPC  
APRIL 21, 2003

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# CFM Migration Strategies

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- Recommendation:
  - Implementation Timeline should be 3 1/2 years
  - Scope includes Call Center, Field Force and Billing
  - Overall costs will be \$3M-\$4M less than originally planned
  - Nicor will manage hardware and software purchases (approximately \$19M)
  - Fixed bid from Accenture to manage all labor (approximately \$46M)
  - Relationships intact
  - Investigate early release components
  - There is a negative impact on annual cash outlay

# Risk Mitigation

| <u>Causes of Failed Projects</u>                                       | <u>4 1/2 Year</u> | <u>3 1/2 Year</u> | <u>Comments</u>   |
|--|-------------------|-------------------|---|
| Excessive Customization  |                   | ↑                 | Significant customization is required within and around SPL to enable split   |
| Data Quality (Input/Output, Interfaces, Conversion, data manipulation) |                   | ↑                 | Significant and ongoing synchronization of data and 2 conversions in 4 1/2 year option  |
| Business Readiness   | ↔                 | ↔                 | More total change/total training required in 4 1/2 year option. But less change/training at one time. Interim environment in 4 1/2 option is complex (BQA and Call Center across two systems) |
| Strong Business Ownership  | ↔                 | ↔                 | Strong at Nicor   |
| Inadequate/Inefficient Testing   |                   | ↑                 | 4 1/2 year option requires 2 full tests and testing of customization  |
| Executive Sponsorship  | ↔                 | ↔                 | Excellent at Nicor, but 3 1/2 year option is less susceptible to change   |
| Forced Date  |                   |                   | Not Application (unless impacted by a rate case)  |
| Phase Containment  |                   | ↑                 | 3 year option will allow for greater focus on billing now, less focus on data synchronization   |
| Teaming across departments   | ↔                 | ↔                 | Minor and diminishing concern at Nicor  |

April 9, 2003

Less Risk ↑

On par ↔

2

# Financial Impact Estimate

## 3 1/2 Year Estimation

| Expenditures (dollars in millions) | 3 1/2 year Project |                |                |                |                |             | Total          | Potential   |
|------------------------------------|--------------------|----------------|----------------|----------------|----------------|-------------|----------------|-------------|
|                                    | 2002               | 2003           | 2004           | 2005           | 2006           | 2007        |                |             |
| Capital Labor Dollars              |                    | \$ 9.8         | \$ 9.3         | \$ 10.8        | \$ 10.5        | \$ -        | \$ 40.4        | 41.6        |
| Hardware Software                  | \$ 1.8             | \$ 5.7         | \$ 3.9         | \$ 5.9         | \$ 2.8         | \$ -        | \$ 20.1        | 19          |
| Total capital                      | \$ 1.8             | \$ 15.5        | \$ 13.3        | \$ 16.7        | \$ 13.3        | \$ -        | \$ 60.6        | 60.6        |
| O.E. Labor                         | \$ -               | \$ 1.0         | \$ -           | \$ 1.5         | \$ 3.3         | \$ -        | \$ 5.8         | 4.6         |
| <b>Total 3 1/2 year Estimate</b>   | <b>\$ 1.8</b>      | <b>\$ 16.5</b> | <b>\$ 13.3</b> | <b>\$ 18.2</b> | <b>\$ 16.6</b> | <b>\$ -</b> | <b>\$ 66.4</b> | <b>65.2</b> |
|                                    |                    |                |                |                |                |             |                |             |
|                                    |                    |                |                |                |                |             |                |             |
|                                    |                    |                |                |                |                |             |                |             |
|                                    |                    |                |                |                |                |             |                |             |
|                                    |                    |                |                |                |                |             |                |             |

### Assumptions

- + Billing Phase begins immediately
- + Above represents cash flow for Nicor Gas
- + New spread of labor done at very high level
- + Hardware/Software purchases have been spread out
- + Accounting will require accrual of unbilled labor (Percent of Completion method)

IT STEERING COMMITTEE  
MARCH 3, 2002

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# CFM Migration Strategies

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- Recommendation:
  - Implementation Timeline should be 3 1/2 years
  - Scope includes Call Center, Field Force and Billing
  - Overall costs will be \$4M-\$5M less than originally planned
  - Nicor will manage hardware and software purchases (approximately \$19M)
  - Fixed bid from Accenture to manage all labor (approximately \$46M)
  - Relationships intact
  - Investigate early release components
  - Assign cross-function project lead
  - There is a negative impact on annual cash outlay

# Risk Mitigation

| <u>Causes of Failed Projects</u>                                       | <u>4 1/2 Year</u> | <u>3 1/2 Year</u> | <u>Comments</u>  |
|--|-------------------|-------------------|--|
| Excessive Customization  |                   | ↑                 | Significant customization is required within and around SPL to enable component phasing  |
| Data Quality (Input/Output, Interfaces, Conversion, data manipulation) |                   | ↑                 | Significant and ongoing synchronization of data and 2 conversions in 4 1/2 year option   |
| Business Readiness   | ↔                 | ↔                 | More total change/total training required in 4 1/2 year option. But less change/training at one time. Complex interim environment in 4 1/2 two phase for BQA and Call Center |
| Strong Business Ownership  | ↔                 | ↔                 | Strong at Nicor with cross-function project lead   |
| Inadequate/Inefficient Testing   |                   | ↑                 | 4 1/2 year option requires 2 full tests and testing of throwaway customization   |
| Executive Sponsorship  | ↔                 | ↔                 | Excellent at Nicor, but 3 1/2 year option is less susceptible to change  |
| Forced Date  |                   |                   | Not Application (unless impacted by a rate case)   |
| Phase Containment  |                   | ↑                 | 3 year option will allow for greater focus on billing now, less focus on data synchronization  |
| Teaming across departments   | ↔                 | ↔                 | Minor and diminishing concern at Nicor   |

March 3, 2003

Less Risk ↑

On par ↔

2

# Financial Impact Estimate

## 3 1/2 Year Option

| Expenditures (dollars in millions) | 3 1/2 year Project |                |                |                |                |                |                | TOTAL          | POTENTIAL |
|------------------------------------|--------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|-----------|
|                                    | 2002               | 2003           | 2004           | 2005           | 2006           | 2007           |                |                |           |
| Capital Labor Dollars              | \$ 0.3             | \$ 10.9        | \$ 11.9        | \$ 12.5        | \$ 6.0         | \$ -           | \$ 41.6        | \$ 41.6        |           |
| Hardware Software                  | \$ 1.8             | \$ 7.2         | \$ 7.0         | \$ 2.5         | \$ 1.5         | \$ -           | \$ 20.0        | \$ 19.0        |           |
| Total capital                      | \$ 2.1             | \$ 18.1        | \$ 18.9        | \$ 15.0        | \$ 7.5         | \$ -           | \$ 61.6        | \$ 60.6        |           |
| O.E. Labor                         | \$ 0.0             | \$ 1.2         | \$ 1.3         | \$ 1.4         | \$ 0.7         | \$ -           | \$ 4.6         | \$ 4.6         |           |
| <b>Total 3 1/2 year Estimate</b>   | <b>\$ 2.1</b>      | <b>\$ 19.3</b> | <b>\$ 20.2</b> | <b>\$ 16.4</b> | <b>\$ 9.2</b>  | <b>\$ -</b>    | <b>\$ 66.2</b> | <b>\$ 65.2</b> |           |
| Original "Budget"                  |                    |                |                |                |                |                | \$ -           |                |           |
| Capital                            | \$ -               | \$ 15.0        | \$ 15.0        | \$ 15.0        | \$ 10.0        | \$ 10.0        | \$ 65.0        |                |           |
| O.E.                               | \$ -               | \$ 1.5         | \$ 1.0         | \$ 1.0         | \$ 1.0         | \$ 0.5         | \$ 5.0         |                |           |
| <b>Total 4 1/2 year Estimate</b>   | <b>\$ -</b>        | <b>\$ 16.5</b> | <b>\$ 16.0</b> | <b>\$ 16.0</b> | <b>\$ 11.0</b> | <b>\$ 10.5</b> | <b>\$ 70.0</b> |                |           |

### Assumptions

- + Billing Phase begins immediately
- + New spread of labor done at very high level (needs validation)
- + Hardware/Software purchases can be spread out (needs validation)
- + 2006 Hardware/software is contingency
- + Accounting requires accrual of unbilled labor
- + Percent complete of milestone will drive accruals (not just payments made)

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# Next Steps

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- + Refine Cash Flow data
- + Update Board, CARE (CMT)
- + Establish communication plan
- + Finalize other contract terms
  - + Resource Commitments
  - + Payment Schedule
  - + Assumptions/Scope Document
  - + Testing Plans
  - + Metrics/Acceptance Criteria
- + Engage Billing Team

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# Credit Update

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## Business Case - \$2M Annual reduction in charge-off

### Findings First 170 Days with CorDaptix

- + \$725,000 **Savings** in hand
  - + High dollar active customers with inside meter and no payment (\$200,000)
  - + New Final Bill credit cycle (\$250,000)
  - + Deposits to final bills (\$300,000)
  - + One-time tax savings (\$100,000)
  - + Special Handling Customers Credit Cycle (\$50,000)
  - + Skip Tracing (\$100,000)
  
- + Other Areas of Value
  - + Deferred Payment Arrangements Credit Cycle (up and running)
  - + Budget Plan Credit Cycle (up and running)
  - + Commercial Account tracking (up and running)
  - + Liens and wage garnishments (500 additional accounts)
  - + Customer-centric linkage (not yet active)

Source: Dave's memo of 2/25/03